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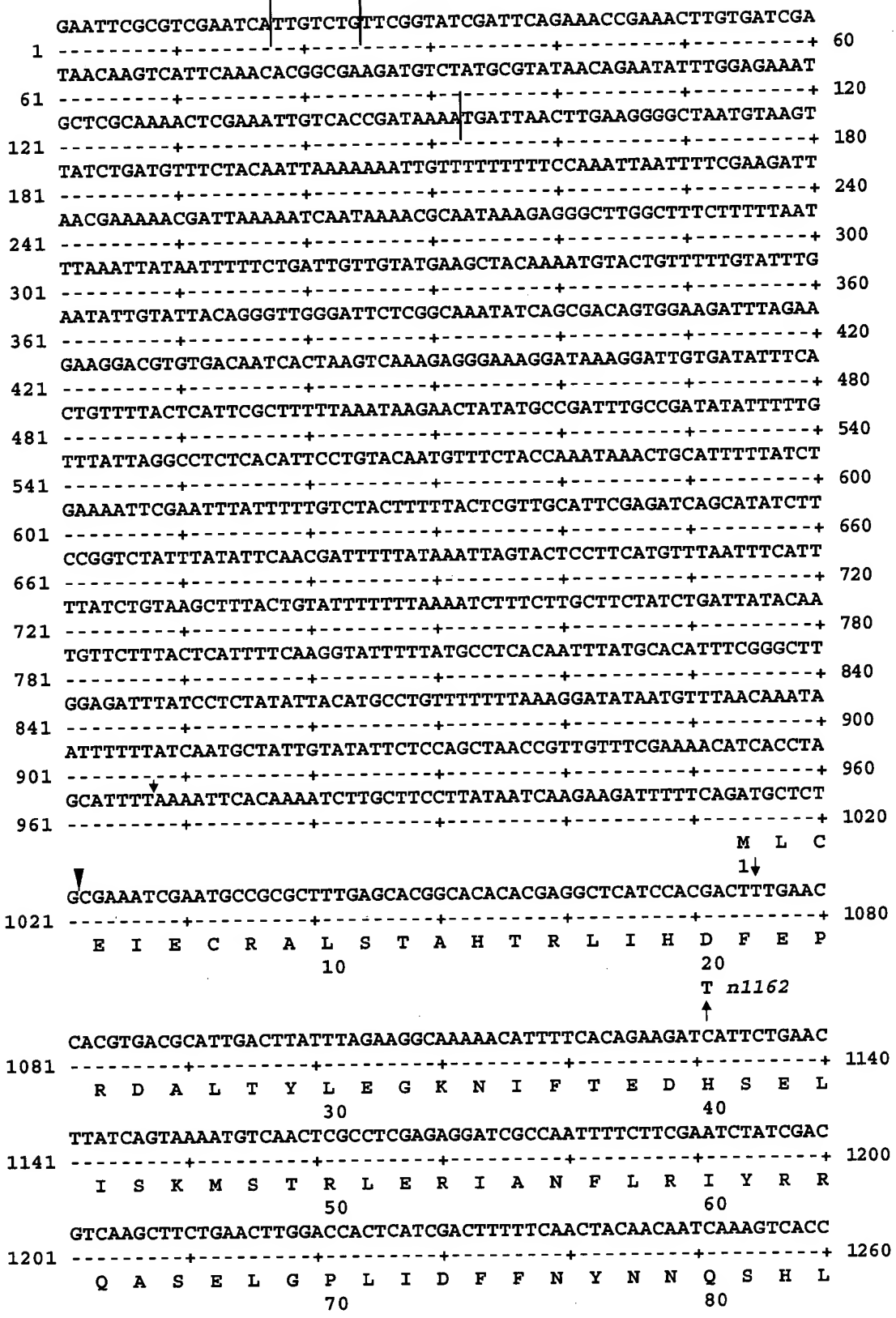
FIG. 1A



Title: CLONING, SEQUENCING AND CHARACTERIZATION OF TWO CELL DEATH GENES AND USES THEREFOR
Applicant (s): H. Robert Horvitz et al.
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FIG. 1B

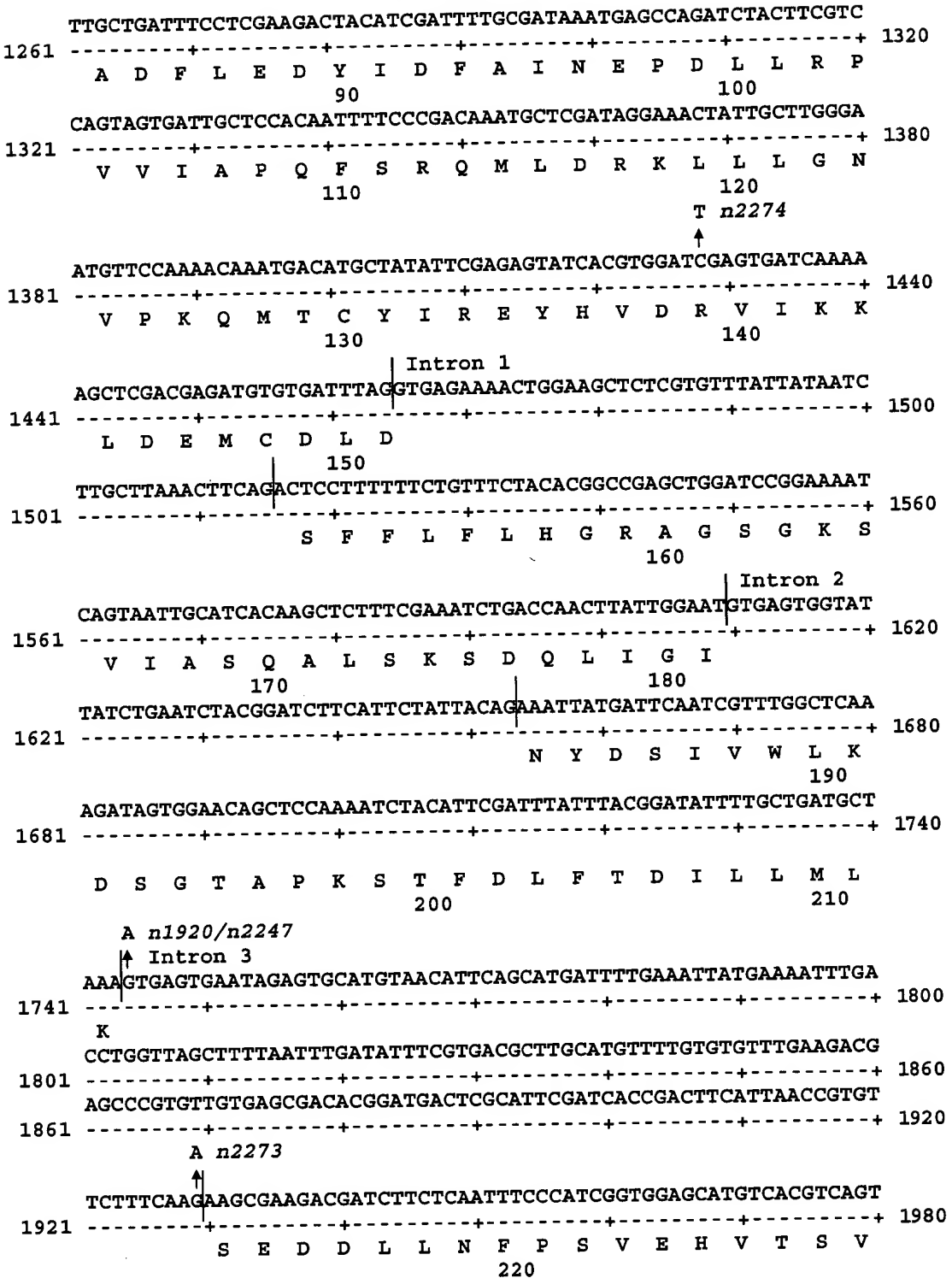

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FIG. 1C

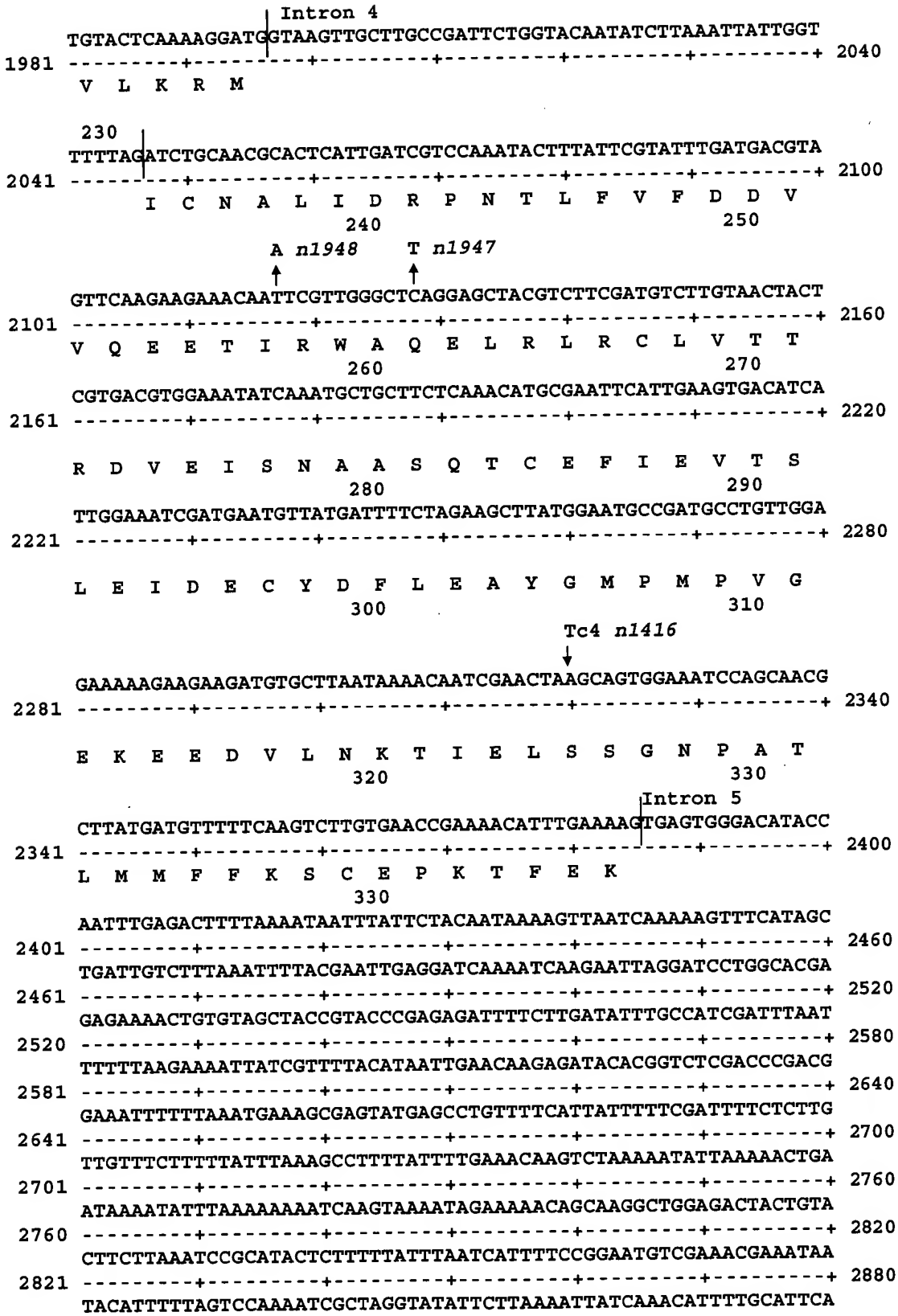

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FIG. 1D

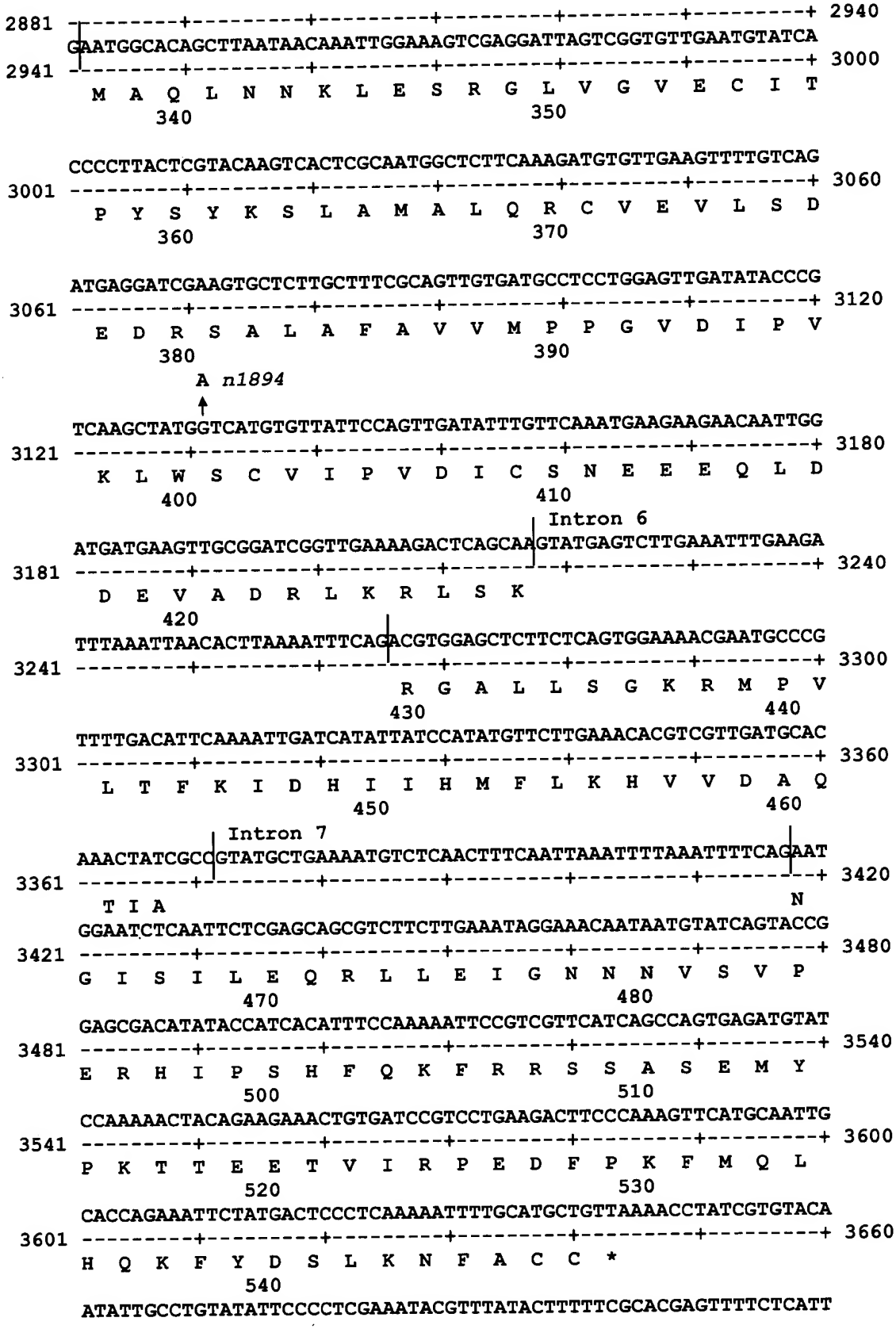

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FIG. 1E

```
3661 ---------+---------+---------+---------+---------+---------+ 3720
     TTTTCATTTGTACTTGTTTTATTTCTCTCCAAAATTTCAGATCTATCCCAAATGTTCTTA
3721 ---------+---------+---------+---------+---------+---------+ 3780
     AATTTAATGTTTTCTACAGATACTCAACACATCTTGTTTCATCTCATCCTTGCTTTTTTT
3781 ---------+---------+---------+---------+---------+---------+ 3840
     TTTCAAATATATTCAGTTTCTTTTATAATTTTAATTAATCGAATTAATACATTCACGTAA
3841 ---------+---------+---------+---------+---------+---------+ 3900
     AGAATTTCGTGGACTATTATTTTATCGCATCCAAATGATTTATTCCCTATTGTTCGAAAC
3901 ---------+---------+---------+---------+---------+---------+ 3960
     TTCCAAATTGATCATTTTTAAACACGCCTCATTAAATTGAAAGTCGTACTTTTAGTCTCG
3961 ---------+---------+---------+---------+---------+---------+ 4020
     AACATGAAGTAAGTTATTTTCTGTGTTCTAAATTCAAAGTGCATTCCAAAAGGACATTTG
4021 ---------+---------+---------+---------+---------+---------+ 4080
     ATGAGTTTTCACGAAAACCGTAATTTTTACAATTTCCTTTCAGTTTTGAAGATGTTCGAT
4081 ---------+---------+---------+---------+---------+---------+ 4140
     TTCTTTCCTCTGTTGGCGTCATTACTACATTTGCTTTGCTGCTTCACTTTATCGAGATTC
4141 ---------+---------+---------+---------+---------+---------+ 4200
     TTGCCATCAATGGAGTTCCATCTAGACCGATAGCAGTCTTCATATCATTATCCCTGTATA
4201 ---------+---------+---------+---------+---------+---------+ 4260
     TTGTACTGTTTCAGTATTTTAACTTATCGATTACGTACTATATTCAGTGGTTCACTGTTT
4261 ---------+---------+---------+---------+---------+---------+ 4320
     TCGGTCAATGGGTGACACGTGCTCGACGANNAATTTTCAACGAACGCAATCTCCTAGTCA
4320 ---------+---------+---------+---------+---------+---------+ 4380
     CTTATCAACCAAGAGCCCTCACCCATG
4380 ---------+---------+------- 4407
```

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FIG. 2

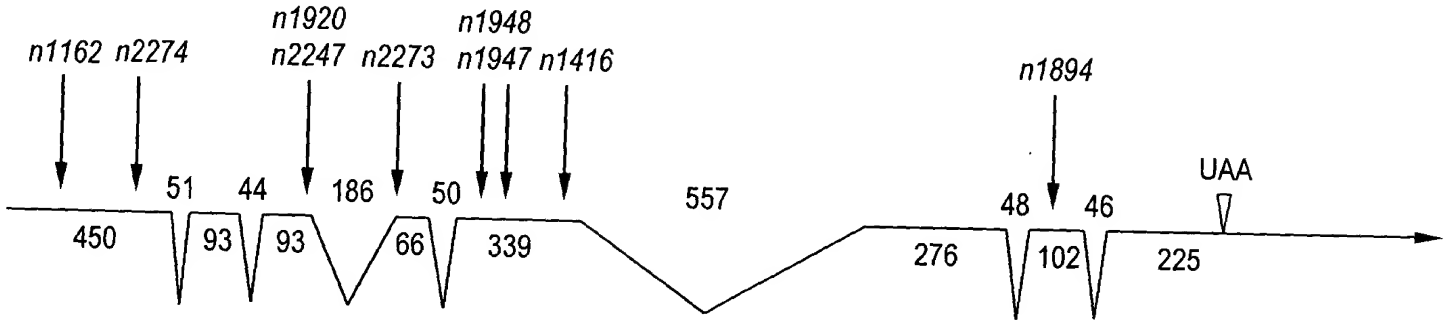

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FIG. 3

	10	12	14	18	21
	X	Y	Z	-X	-Z
Calcium-binding loop concensus	D	N	S	T	E
		D	N	S	
			D	E	
				Q	
				D	
				N	
EF-hand consensus	O	*	O	*	O	G	*	*	O	*	*	E
ced-4 sequence 1	Y	N	**N**	Q	**S**	H	L	A	**D**	F	L	**E**
sequence 2	S	L	E	I	**D**	E	C	Y	**D**	F	L	**E**
Parvalbumin (carp)	**D**	Q	**D**	K	**S**	**G**	F	I	**E**	E	D	**E**
(hake)	**D**	Q	**D**	K	**D**	D	F	I	G	E	D	**E**
(ray)	**D**	S	**D**	G	**D**	H	K	I	G	V	D	**E**
SCBP (*Amphioxus I*)	**D**	I	**N**	K	**D**	D	V	V	**S**	W	E	E
ICaBP (bovine)	A	K	E	G	**D**	P	Q	L	**S**	K	E	E
	D	K	**N**	G	**D**	**G**	E	V	**S**	F	E	E
Troponin C (rabbit)	**D**	A	**D**	G	G	**G**	D	I	**S**	V	K	**E**
	D	E	**D**	G	**S**	**G**	T	I	**D**	F	E	**E**
	D	R	**N**	A	**D**	**G**	Y	I	**D**	A	E	**E**
	D	K	**N**	N	**D**	**G**	R	I	**D**	F	D	**E**
Calmodulin (bovine)	**D**	K	**D**	G	**N**	**G**	T	I	T	T	K	**E**
Trypsinogen	L	G	E	D	**N**	I	N	V	V**E**	G	N	**E**
Fibrinogen	**D**	N	**D**	N	**D**	K	F	E	G**N**	C	A	**E**
Villin	G	V	**D**	P	**S**	R	K	E	**N**	H	L	**S**
GBP	D	L	**N**	K	**D**	G	Q	I	**Q**	_	I	**E**

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FIG. 4A

ced-3 Genomic Sequence

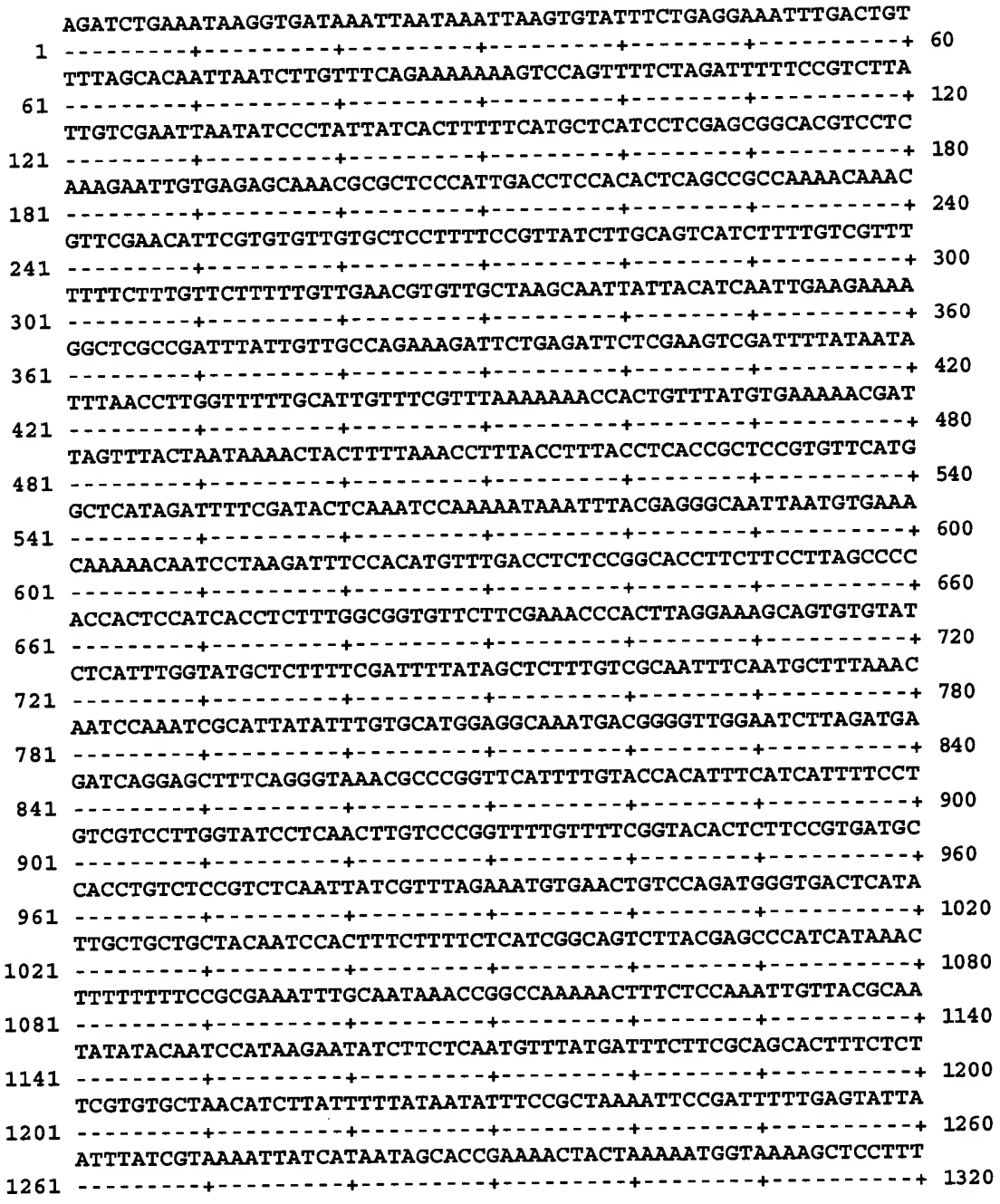

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FIG. 4B

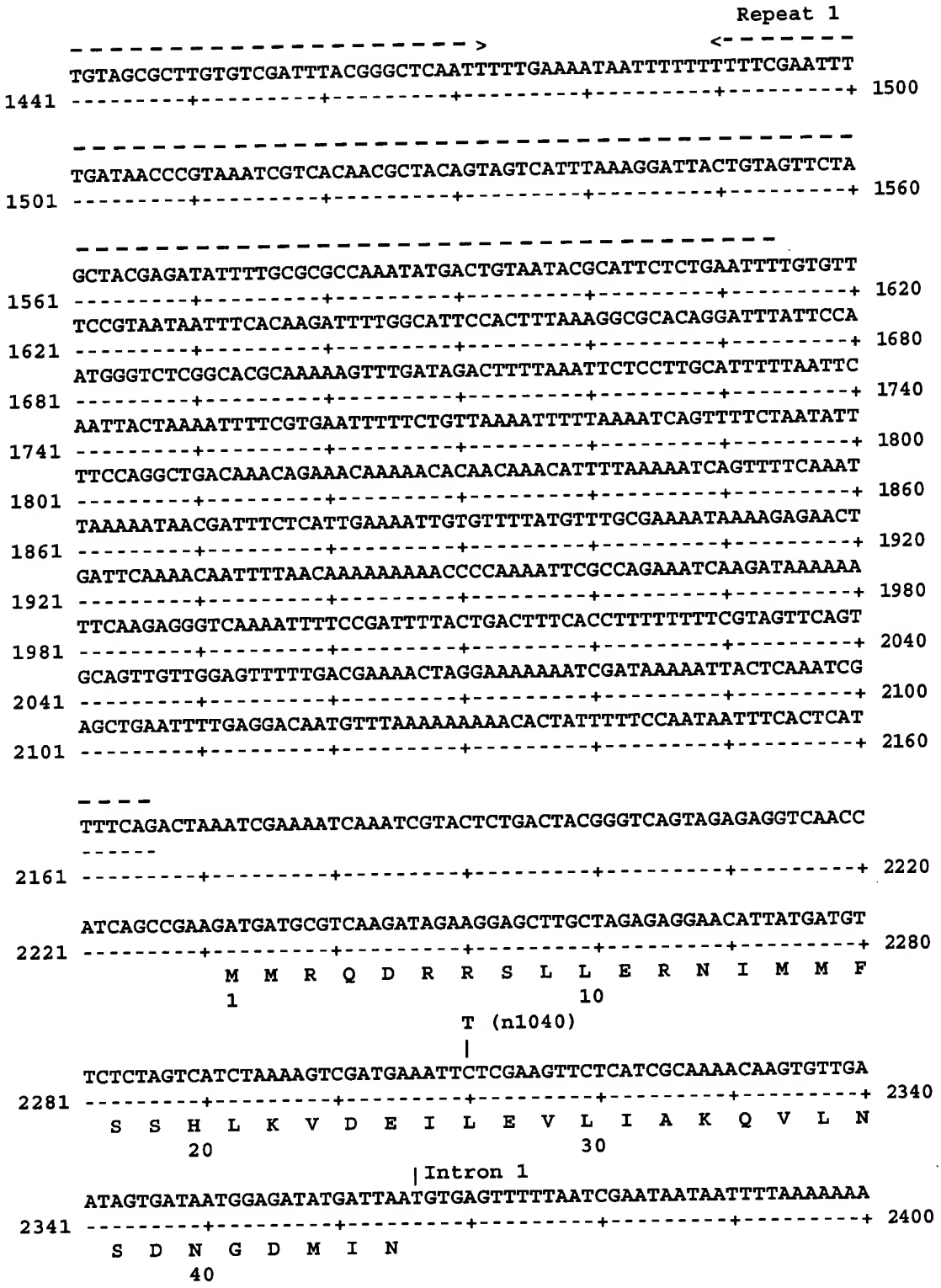

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FIG. 4C

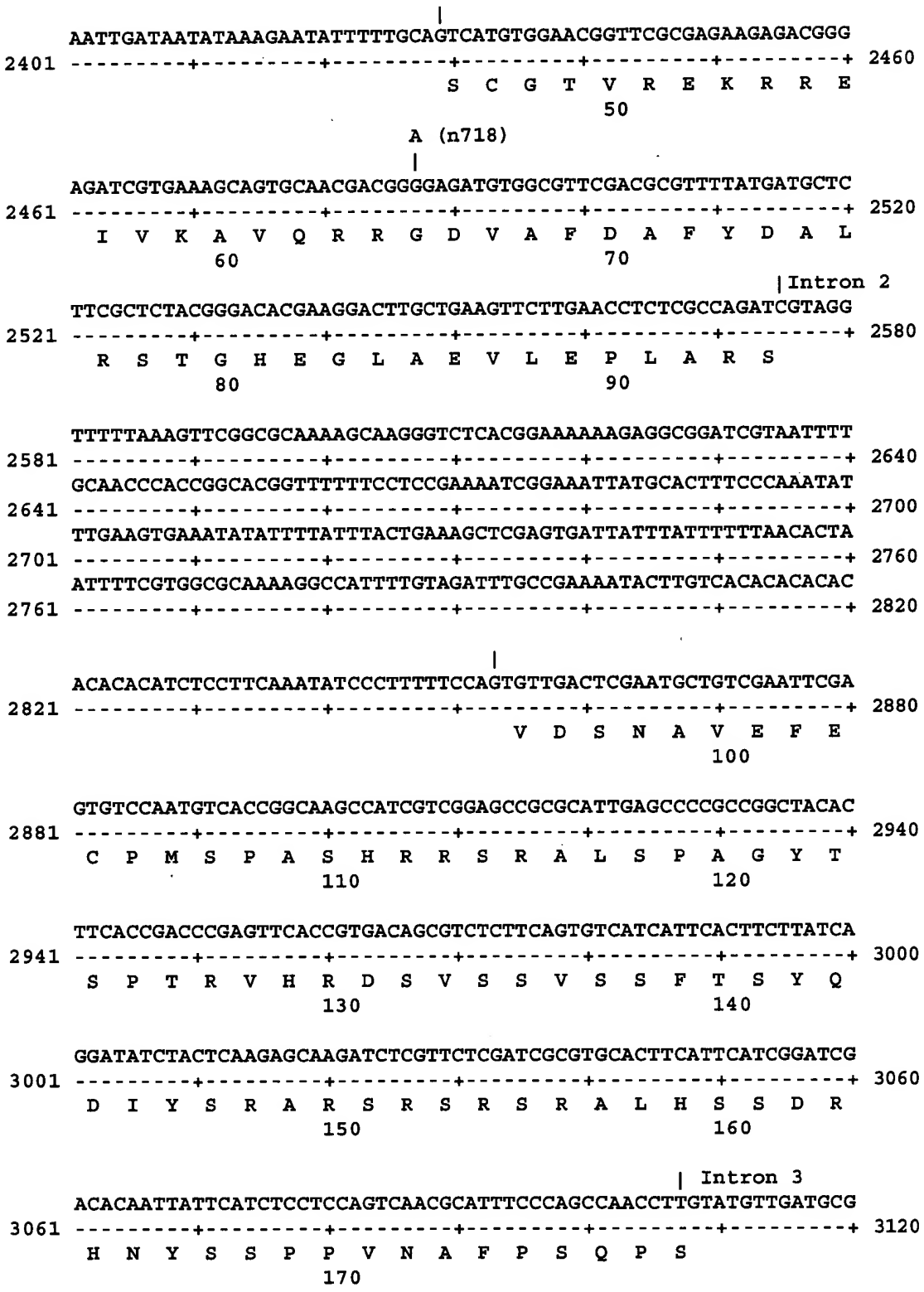

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FIG. 4D

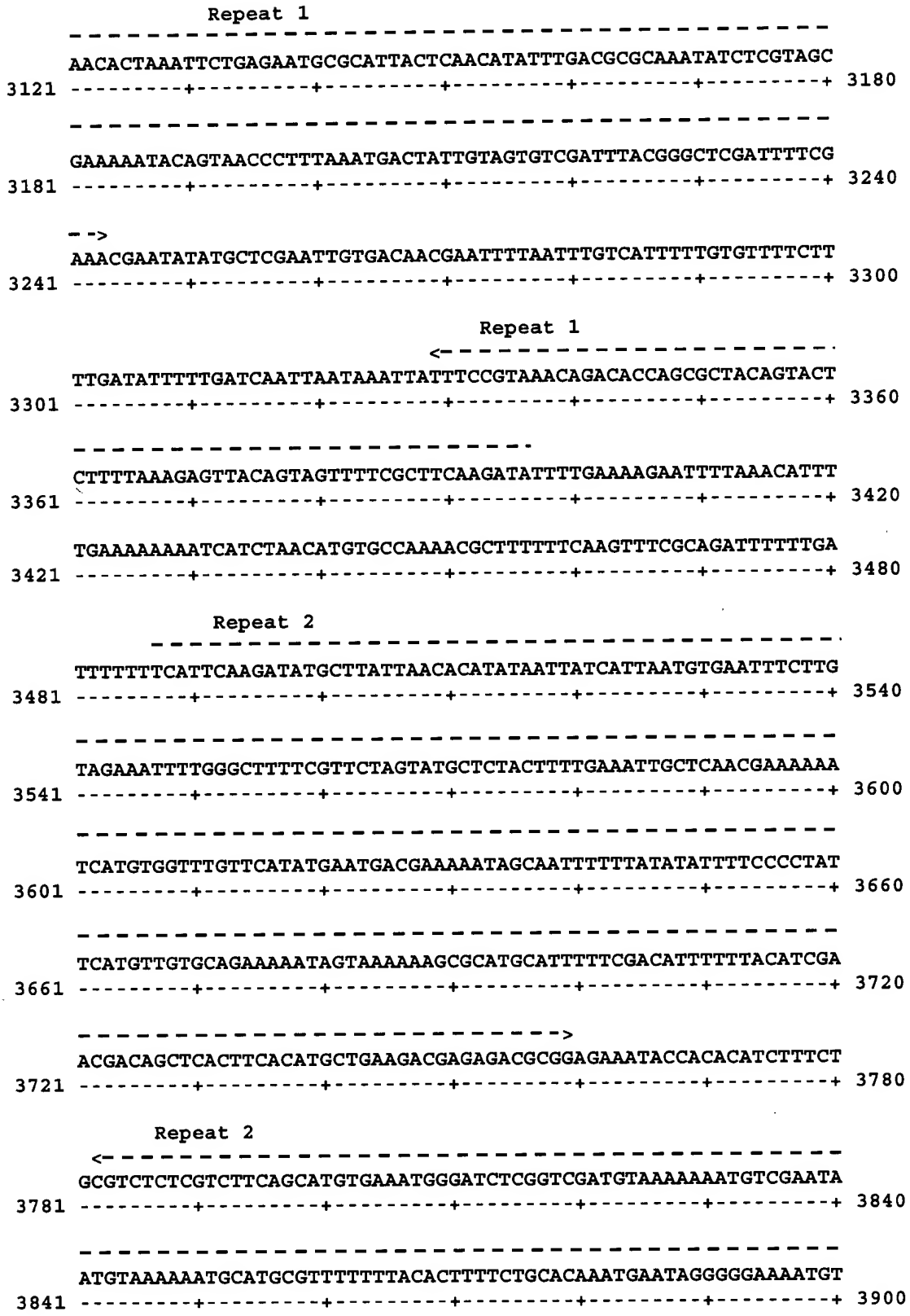

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FIG. 4E

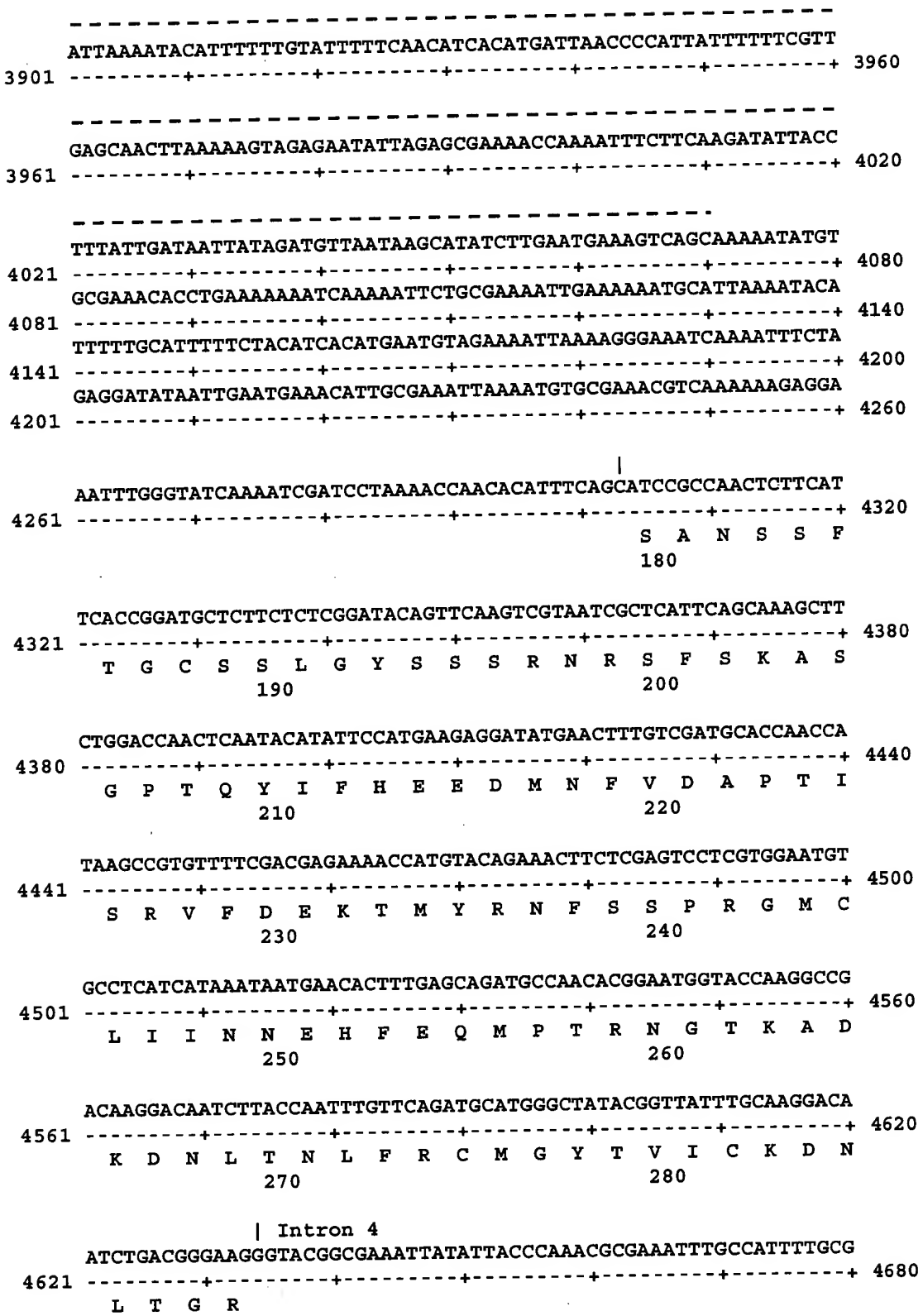

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FIG. 4F

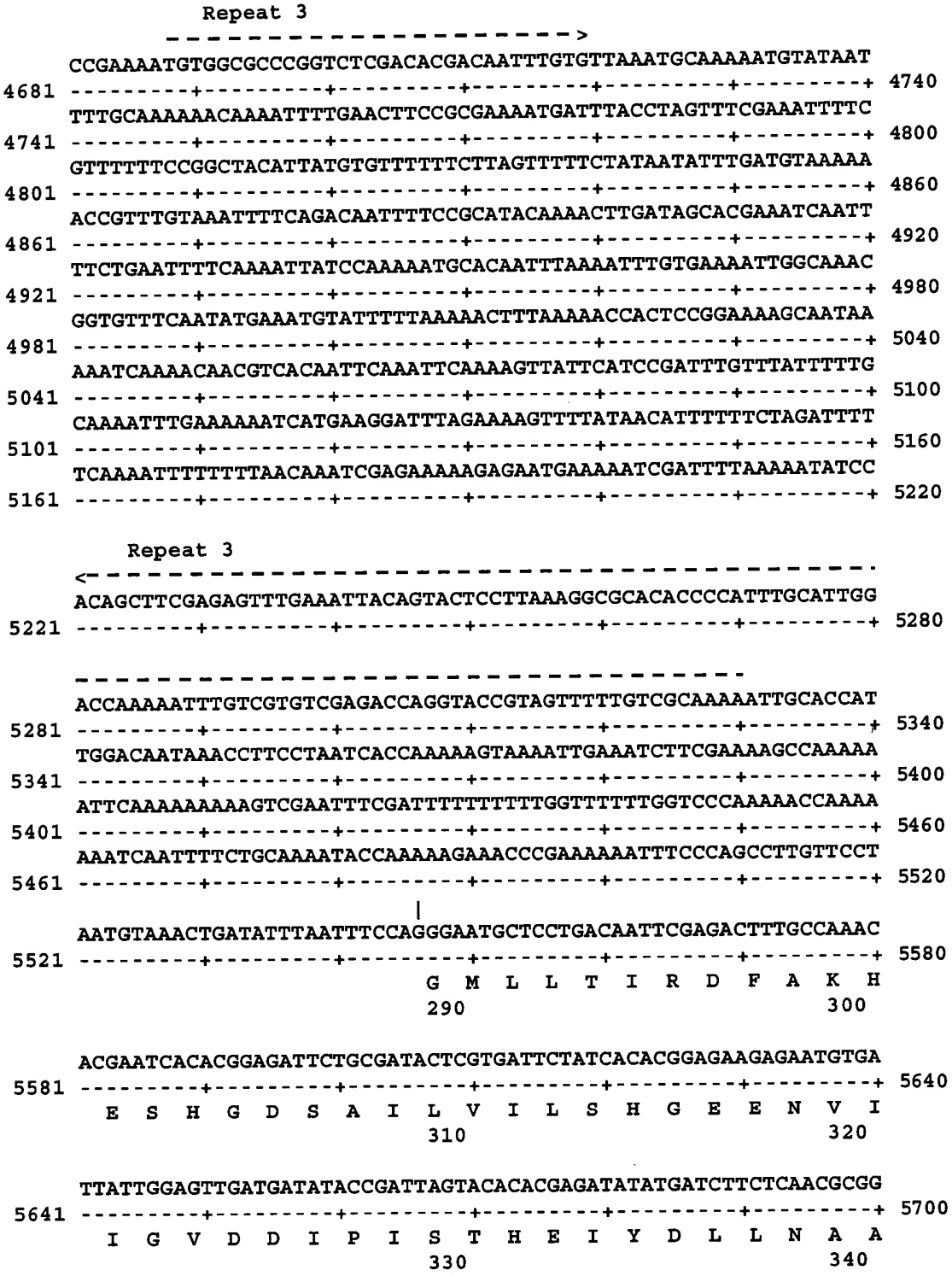

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FIG. 4G

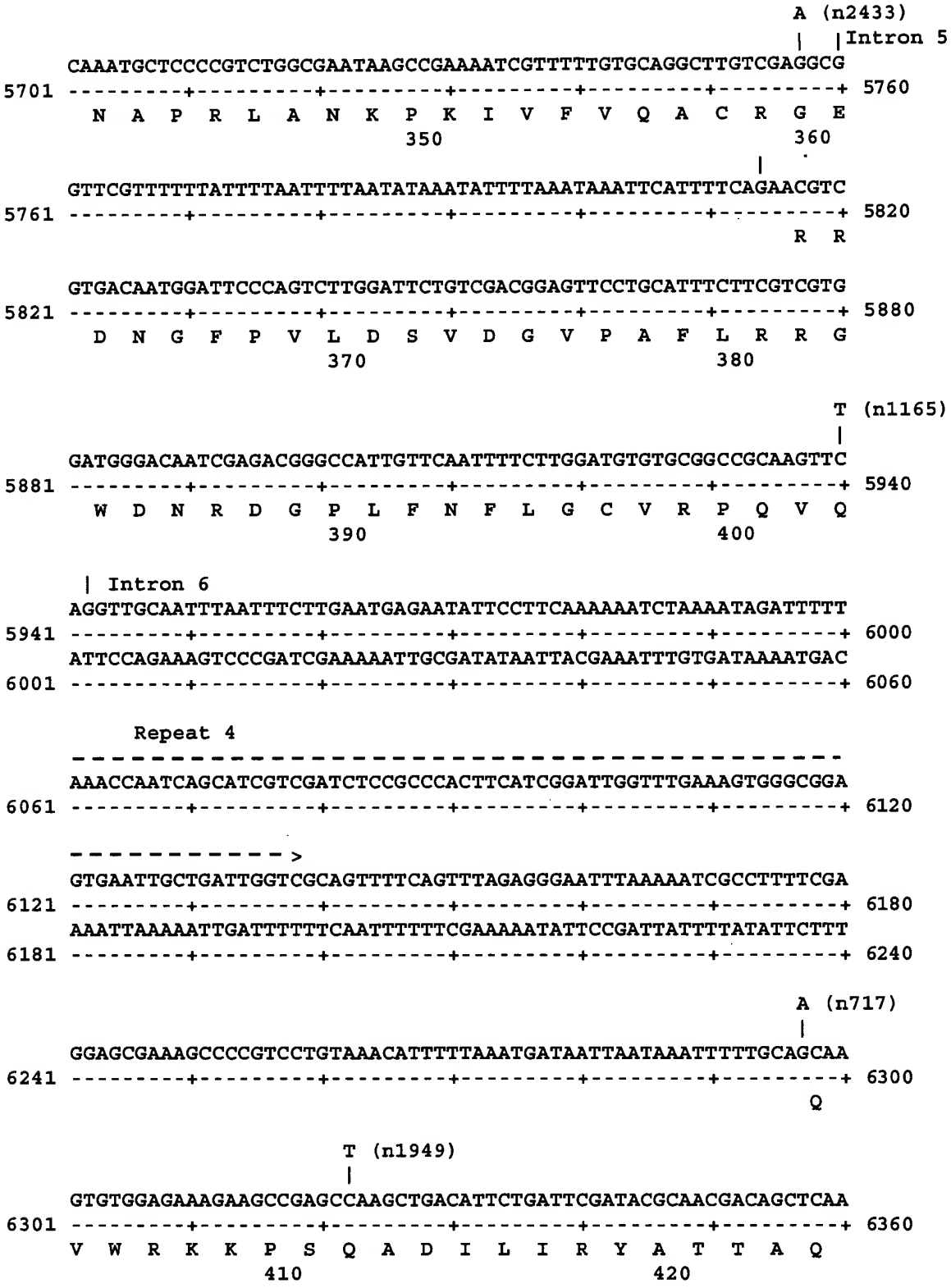

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FIG. 4H

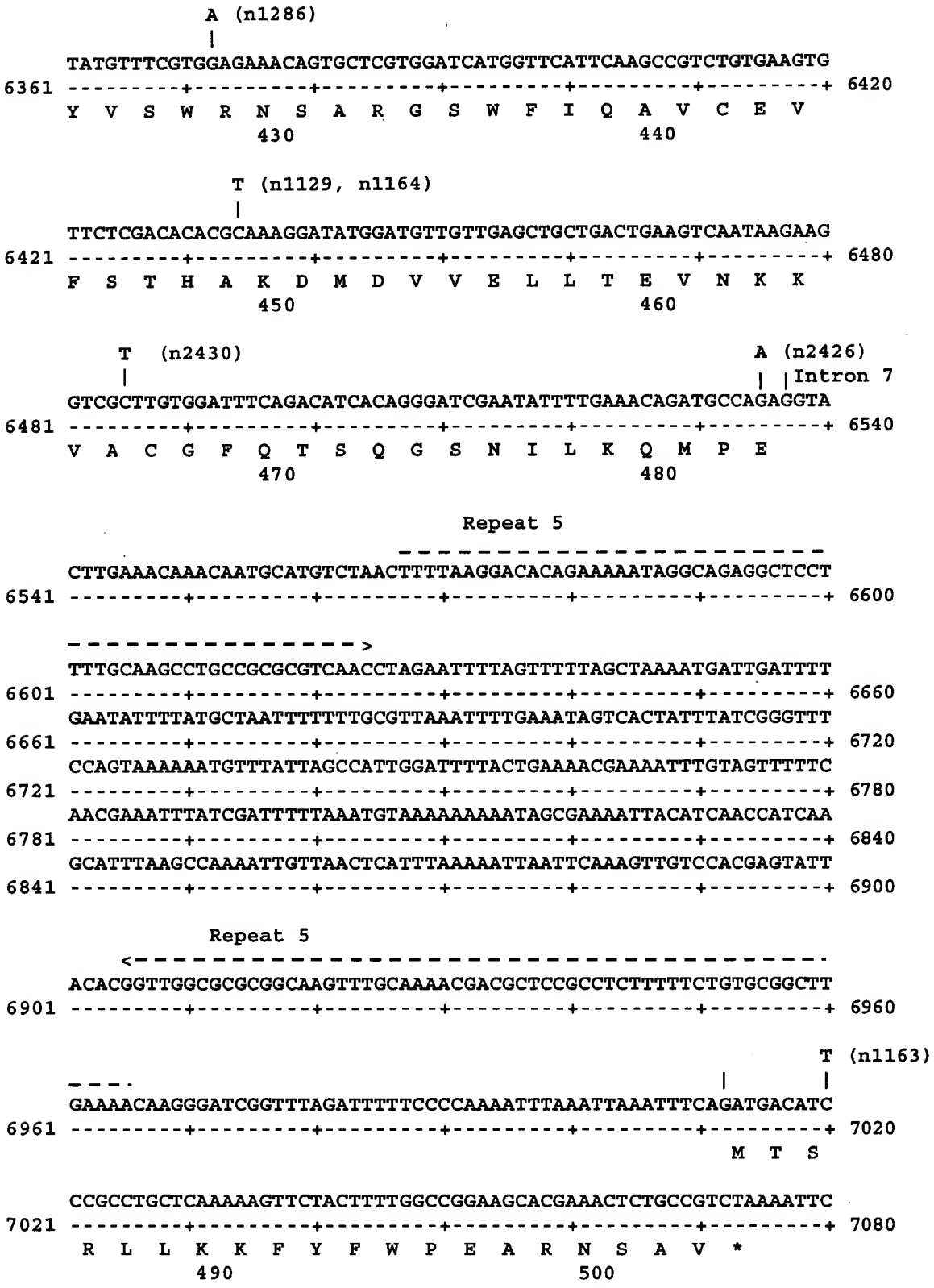

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FIG. 4I

```
     ACTCGTGATTCATTGCCCAATTGATAATTGTCTGTATCTTCTCCCCCAGTTCTCTTTCGC
7081 ---------+---------+---------+---------+---------+---------+ 7140
     CCAATTAGTTTAAAACCATGTGTATATTGTTATCCTATACTCATTTCACTTTATCATTCT
7141 ---------+---------+---------+---------+---------+---------+ 7200
     ATCATTTCTCTTCCCATTTTCACACATTTCCATTTCTCTACGATAATCTAAAATTATGAC
7201 ---------+---------+---------+---------+---------+---------+ 7260
     GTTTGTGTCTCGAACGCATAATAATTTTAATAACTCGTTTTGAATTTGATTAGTTGTTGT
7261 ---------+---------+---------+---------+---------+---------+ 7320
     GCCCAGTATATATGTATGTACTATGCTTCTATCAACAAAATAGTTTCATAGATCATCACC
7321 ---------+---------+---------+---------+---------+---------+ 7380
     CCAACCCCACCAACCTACCGTACCATATTCATTTTTGCCGGGAATCAATTTCGATTAATT
7381 ---------+---------+---------+---------+---------+---------+ 7440
     TTAACCTATTTTTTCGCCACAAAAAATCTAATATTTGAATTAACGAATAGCATTCCCATC
7441 ---------+---------+---------+---------+---------+---------+ 7500
     TCTCCCGTGCCGGAATGCCTCCCGGCCTTTTAAAGTTCGGAACATTTGGCAATTATGTAT
7501 ---------+---------+---------+---------+---------+---------+ 7560
     AAATTTGTAGGTCCCCCCCATCATTTCCCGCCCATCATCTCAAATTGCATTCTTTTTTCG
7561 ---------+---------+---------+---------+---------+---------+ 7620
     CCGTGATATCCCGATTCTGGTCAGCAAAGATCT
7621 ---------+---------+---------+--- 7653
```

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FIG. 5A

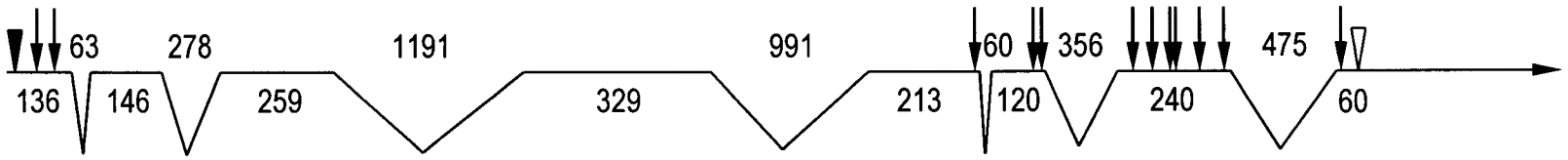

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FIG. 5B

ced-3 Mutations are Clustered

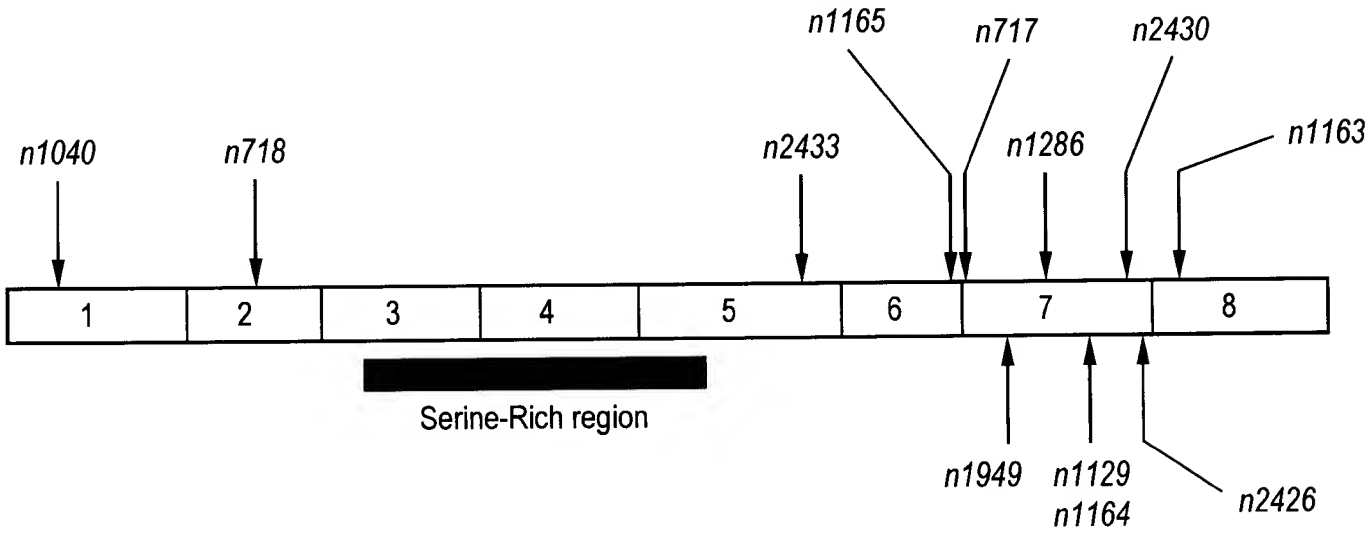

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FIG. 6

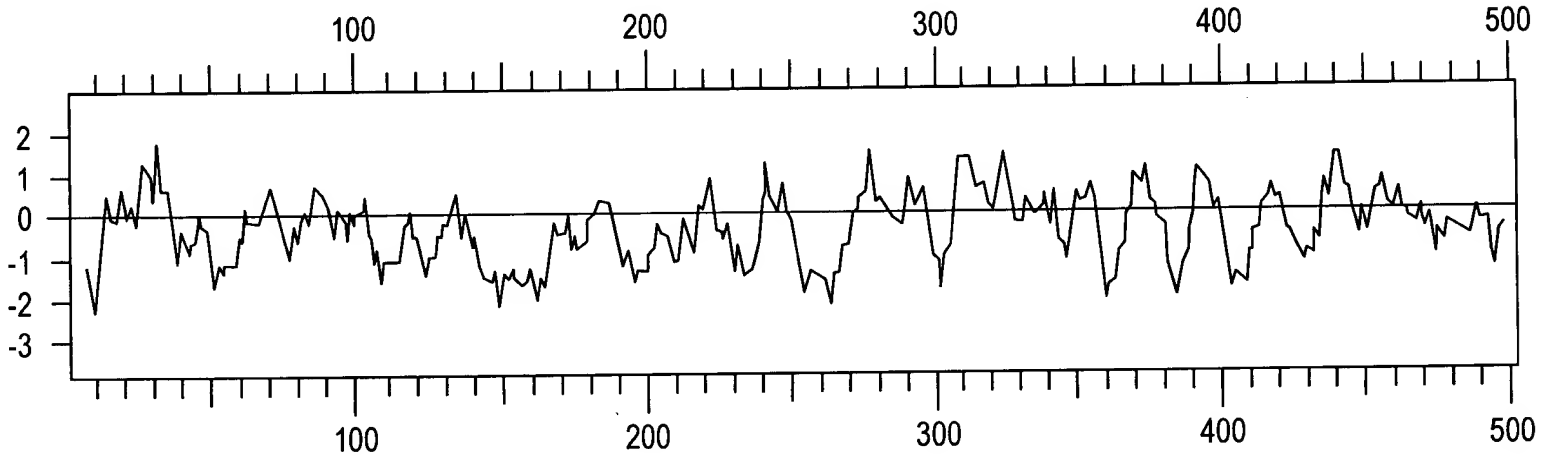

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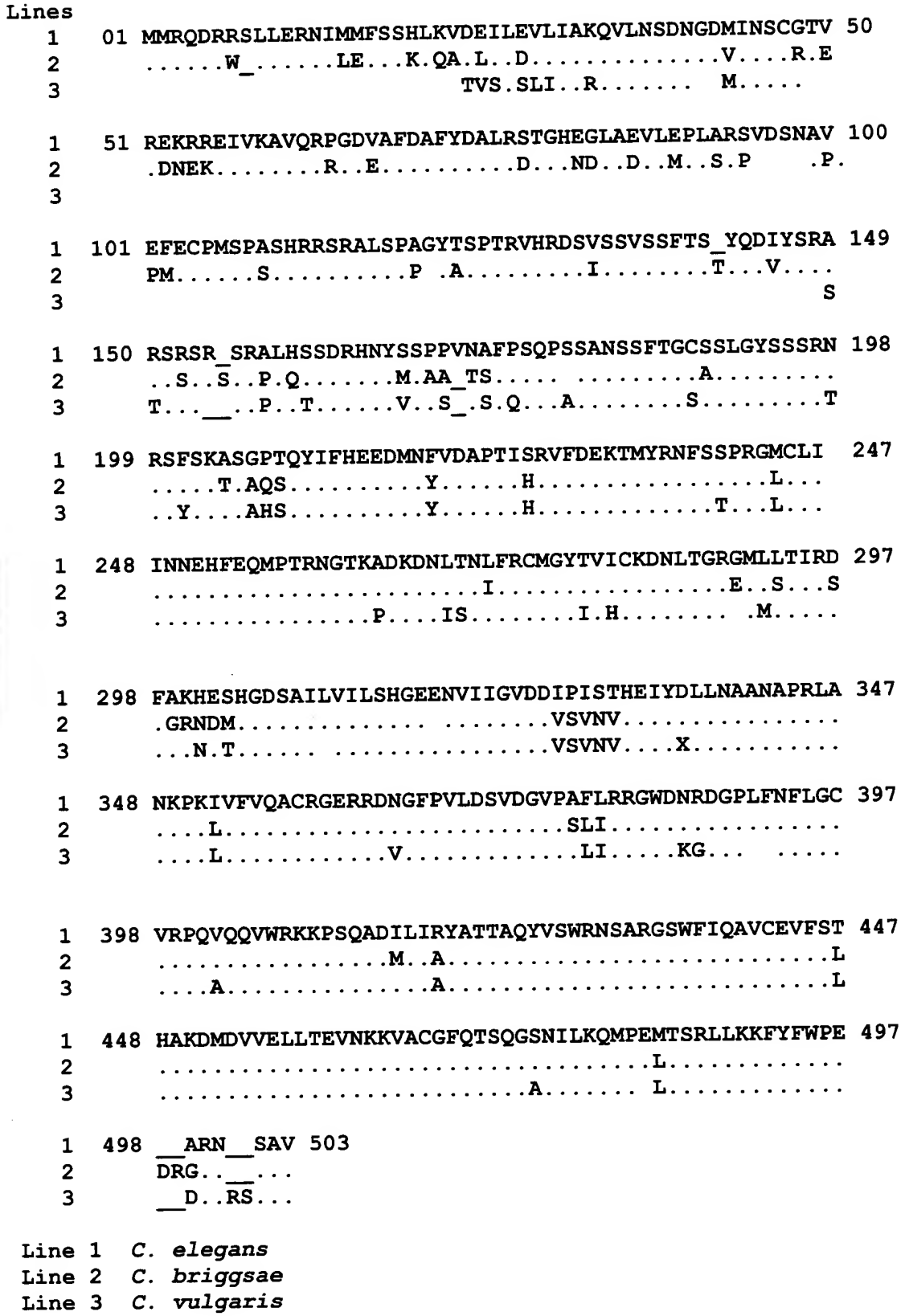
FIG. 7



Line 1 *C. elegans*
Line 2 *C. briggsae*
Line 3 *C. vulgaris*

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FIG. 8

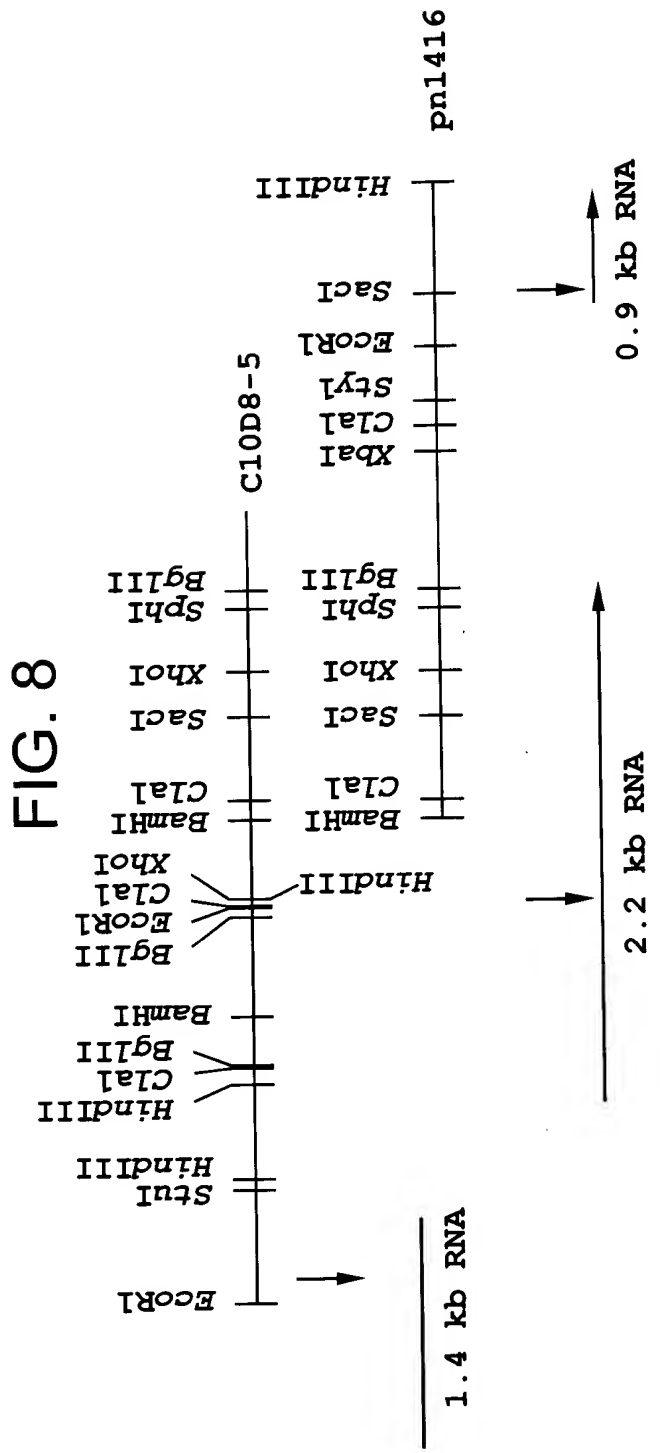

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FIG. 9

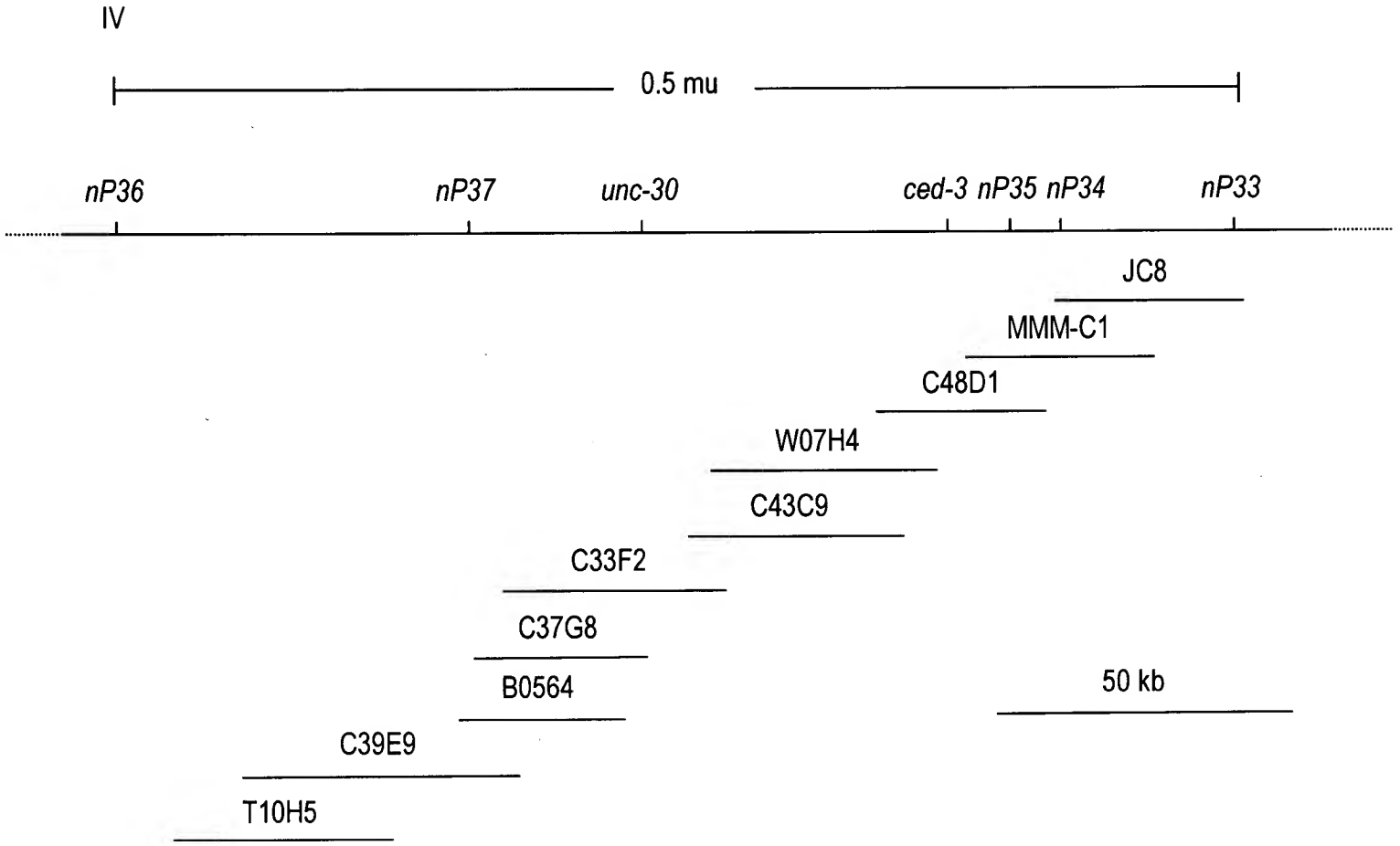

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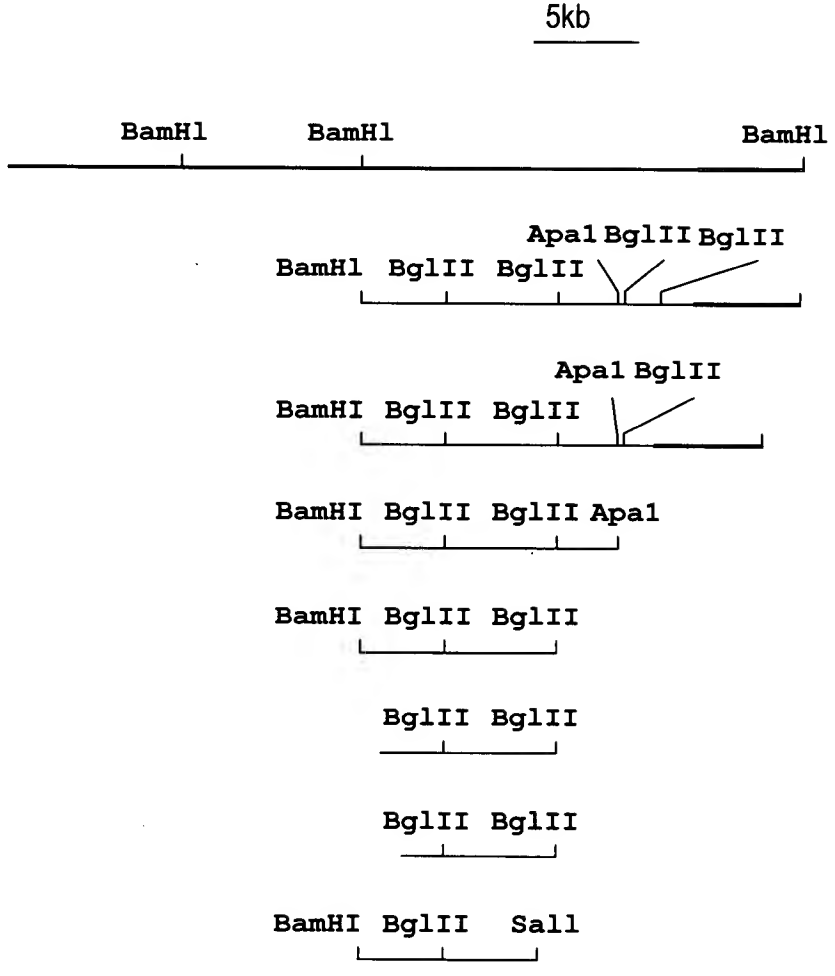
FIG. 10

Summary of the experiments to localize *ced-3* gene within C40D1